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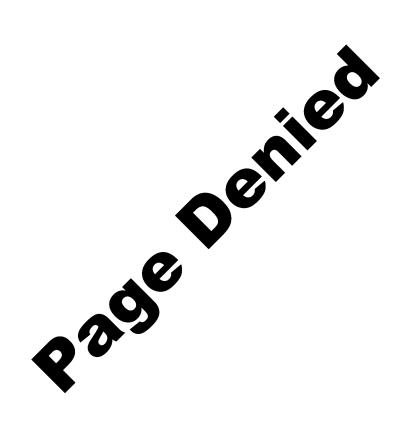
imagery analysis report

Jarmah Missile Launch Site (OTRAG), Jarmah, Libya (S)

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JARMAH MISSILE LAUNCH SITE (OTRAG), JARMAH, LIBYA (S)

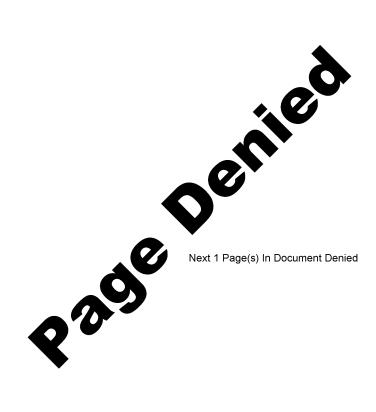
INTRODUCTION

1. (S/D) This report provides information on the rocket test facility the West German firm, Orbital Transport-und Rketen-Aktiengellschaft (OTRAG), is constructing near Jarmah, Libya. OTRAG's goal is to develop a rocket made from as many mass-produced, commercially available components as possible and thus keep costs down.\(^1\) The firm built and operated a similar facility in Zaire until its contract with the government of Zaire was cancelled in April 1979.\(^2\)

DISCUSSION
2. (S/D) Jarmah Missile Launch Site (OTRAG) is located 5.5 nautical miles (nm) east of Jarmah and 380 nm south of Tarabulus (Tripoli), Libya (Figure 1). The facility which was first observed on imagery of is approximately 2 by 1 kilometers in size and secured by a fence. A large portion of the fenced area is open and is probably intended for future expansion of the facility. The launch area (Figure 2) is situated in an orchard and consists of a lattice launch tower, a propellant storage area, 16 prefabricated housing units, at least five workshops/support buildings, a water reservoir, a well and pumphouse, and a swimming pool. A 2,370- by 25-meter graded-earth runway, 3 nm northnorthwest of the facility, and a probable observation station, 1.7 nm west of the facility, have recently been constructed (Figure 1). Construction of the runway had begun by when initial ground scarring was observed. The observation station, which consists of a van trailer on a cliff summit, was also first observed on
3. (S/D) The lattice launch tower is 19 meters in height and is positioned on a probable concrete pad at the "T" junction of two tree lines (Figure 2). The unusually close proximity of the launch pad to the tree lines is probably for concealment or protection from blowing sand. Several workshops and six propellant mixture pallets are positioned along the east/west portion of the tree line. The tower and the propellant mixture pallets appear to be identical to those previously used in Zaire by OTRAG.
4. (S/D) Activity at the facility has been sporadic since when ten prefabricated housing units and the propellant mixture pallets were first identified. On three more prefabricated housing units and additional ground scarring at the airfield were observed. From until no significant activity was noted at the launch site; however, construction work continued at the airfield. The facility was not imaged between three more prefabricated housing units and the water reservoir had been added. The water reservoir is served by a pipeline from a well and pumphouse; it was probably constructed to provide a ready supply of washdown water in the event of an accidental spillage of the highly corrosive, white fuming nitric acid used as part of the rocket fuel. On no significant activity was observed at the launch site, but a Twin Otter (DHC-6 general-purpose, light short takeoff and landing aircraft) was at the airfield.
REFERENCES
IMAGERY
(S/D) Selected imagery acquired from August 1980 through March 1981 was used in the preparation of this report.
DOCUMENTS
 Aviation Week and Space Technology, "Low-Cost Satellite Launcher Developed by Germans," 12 Sep 77, pp 42-47 (UNCLASSIFIED)
 Aviation Week and Space Technology, "Otrag Locates Rocket Testing on Libyan Site," 1 Dec 80, pp 18-20 (UNCLASSIFIED)
(S) Comments and queries regarding this report are welcome. They may be directed to World Forces Division, Imagery Exploitation Group, NPIC,

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